

## ABSTRACT OF THE DISCLOSURE

A plasma etching apparatus for etching semiconductor wafers. The plasma etching apparatus has a reaction tube  
5 made of a dielectric material and a high frequency antenna located around the reaction tube for generating a plasma inside the reaction tube. The high frequency antenna has a sloped segment that produces a relatively large capacitive coupling with the reaction tube. The high frequency antenna  
10 is moved by a driver around the reaction tube in a horizontal plane.